W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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In This Issue...

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Federal Government using "E-Beams" to Screen Incoming Mail

The U.S. Postal Service is installing sanitizing equipment to destroy biological weapons, such as powdered anthrax, concealed in envelopes and parcels. The equipment, purchased by the federal government, consists of eight "turnkey" electron beam irradiation devices made by SureBeam, Inc., a subsidiary of The Titan Corporation of San Diego, CA.

SureBeam's primary business is using X-ray technology to sterilize hospital equipment and to destroy harmful microbes in meat, fruit and vegetables such as E. coli and salmonella ...much like pasteurization does to milk. The FDA-approved system has been used since 1993. SureBeam® can kill the anthrax bacteria and anthrax spores in seconds and can be used on boxes of mail prior to sorting.

Titan, a high-technology military contractor, developed linear accelerator technology for national defense purposes in the mid-1980's. Their irradiation equipment uses 5-million volt high energy electron beams of electrons to break up the DNA of micro-organisms or render it unable to reproduce.

Their e-beam sterilizer was later integrated with a conveyor system. The beam can quickly pass through envelopes and other packaging and can be used on a moving assembly line.

The firm also provides communications and information technology services to the Department of Defense and various intelligence agencies. The company has 8,000 employees and annual sales of more than $1 billion.

The "e-beam" machines, which cost $5 million each, will be used by the U.S. Postal Service to sanitize mail in an attempt to eliminate the threat of anthrax contamination. An option exists to increase the equipment purchase to another twelve systems.

The USPS processes some 200 billion pieces of small mail each year, so the technology will only be used selectively at high risk "targeted areas." The machines can treat about 1,000 pounds of mail per hour at a cost of about a penny a letter.

A first class postage rate increase was already in the works even before the anthrax mailings – from 34 to 37 cents. The USPS now says their additional costs will be between $3 and $4 billion.

In addition to providing the hardware, Titan wil also operate and maintain the sanitizing systems fo the Postal Service. We heard that Titan has alread delivered the first system to the Washington, DC "Brentwood" postal facility.

The U. S. Postal Service has also contracted t use Titan-owned sterilization centers (we understand in New Jersey and Ohio) to sanitize mail, using their electron beam technology. Titan currently has contract sterilization Service Centers located in San Diego, CA, Denver, CO and Lima, OH ...and plans to add more locations.

Tractor-trailers filled with mail destined for the federal government is now on its way back to Wash ington after being sterilized at off-site decontamination plants. The White House's Office of Homeland

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Security has ordered the delivery delayed until all agencies are warned that the process used to kill any anthrax bacteria might adversely affect some contents such as drugs, seeds, film and medical and electronic devices. Residential recipients will receive irradiated mail in bags containing a warning.

The first class mail delay has forced many government agencies to rely on e-mail, faxes, UPS and FedEx.

Anthrax Scare Impacts FCC Mail Handling

The FCC has issued several Public Notices concerning mail handling at its Washington, DC headquarters and Gettysburg, Pennsylvania licensing facility.

In Washington, DC, the FCC is only accepting hand or messenger-delivered filings at their 9300 East Hampton Drive, Capitol Heights, MD, facility. Filings enclosed in envelopes are not be accepted.

The Commission's unique agency zip code "20554" cannot be used for documents delivered by Federal Express or any other express mail service. Instead, you must use the zip code "20024." Documents sent by USPS mail should use the "20554" zip code.

The FCC staff in Washington DC also is not accepting any documents enclosed in envelopes. Envelopes are being required to be disposed of in a receptacle placed outside the building.

The FCC said that "In light of the recent events over the past few months", the Gettysburg Office has moved its mailroom off-site to the rear entrance of 35 York Street, Gettysburg, PA 17325. The hours of operation are 8:00 a.m. to 4:30 p.m daily.

"Effective immediately, all overnight mail couriers, i.e., FED EX, UPS, Airborne, and so forth, require the "ship to" address for the FCC Gettysburg Office to be 'Rear entrance 35 York Street, Gettysburg, PA 17325."

No address change is required for mail delivered by the U.S. Postal Service. The USPS has been accepting mail addressed to: 1270 Fairfield Road, Gettysburg, PA 17325 and is automatically diverting it to the new off-site mailroom.

"This new off-site mailroom facility does not affect applications or any other filings requiring a fee." FCC said. "Feeable filings should be sent to the address as noted in the Wireless Telecommunications Bureau Fee Filing Guide."

The Commission said it found it necessary at this time to make these changes to its mail delivery procedures to protect the health and safety of its employees.

The Commission also said that anyone wishing to hand-deliver documents to the Wireless Telecommunications Bureau's Gettysburg Office should also deliver them to the rear entrance of 35 York Street, Gettysburg, PA 17325 between 8:00 a.m. and 4:30 p.m.

As a precautionary measure, effective immediately and until further notice, the following procedure is in place:

- The staff at the Gettysburg office's filing counter at 35 York Street will not accept documents enclosed in envelopes.
- Originals and copies of each official filing must continue to be addressed to the Commission and held together with rubber bands or fasteners. As usual, "stamp and return" copies will be provided as long as they clearly accompany each individual filing.
- Documents intended to be received by specific staff persons within Bureaus and Offices must be clearly labeled on the first page of the document or with a cover sheet indicating the destination. As appropriate, originals and copies must be held together with rubber bands or fasteners.
- Filings requesting confidential treatment under the Commission's rules must also be filed without envelopes. As long as the request for confidential treatment is clearly indicated on the first page of the filing, the staff at the filing counter will enclose the filing in a Commission-supplied envelope labeled "confidential" to signal that the filing contains material that is subject to a request for confidential treatment.
- The Gettysburg office will work with specific Bureaus and Offices to handle bulk filings in accordance with the precautionary measures described above.

As the Commission continues to balance its efforts to be accessible to its customers with the need for heightened security measures, the Commission encourages its customers to make full use of the Commission's electronic filing systems to facilitate the filing of documents.

Electronic filing not impacted ...with one exception

All electronic filing of miscellaneous Amateur Radio license modifications (such as name and address changes), renewals, requests for duplicate licenses, and new or upgraded licenses will continue to be handled quickly. As a general rule, all electronically filed applications and comments are acted on by the FCC within 24 hours and are not impacted by recent events.

The exception is the processing of applications for "Vanity" station call signs. The FCC processes both electronically-filed and paper-filed requests for Amateur station call signs selected by the user in parallel. Since there are a limited number of preferential station call signs, the FCC has been processing both simultaneously every day so that both paper and electronic filers have an equal opportunity to obtain the same specific call sign.

Effective October 30th, the FCC temporarily suspended processing of all vanity applications to allow time for any paper-filed Vanity call sign application to be properly received in the Gettysburg office from the off-site mail

facility.

It is assumed that mail is shipped from the Gettysburg off-site mail room to a sanitizing facility. Once the mail is received back at the FCC, it will be coordinated with electronically filed applications of the same day so that all applications will not have an equal opportunity to receive a specific available call sign.

This means that all paper applications and electronically filed applications that are dated as being received on the same day will be processed together to allow fairness in the assignment of available vanity call signs.

At present, all paper-filed applications are being delayed as much as two to three weeks due to the necessity that all government "snail mail" be security screened off site at various mail processing service centers. As a result, electronic applications are also being held a minimum of two weeks.

We have been informed that vanity call sign grants could be delayed as long as 30 days beyond the normal processing time which was 20 days.

FCC creates Homeland Security Policy Council

On November 14th, the FCC announced the creation of a Homeland Security Policy Council. Their mission is:

- to assist the Commission in evaluating and strengthening measures for protecting U.S. communications services;
- to assist the Commission in ensuring rapid restoration of communications services and facilities that have been disrupted as the result of threats to, or actions against, our Nation's homeland security; and
- to ensure that public safety, health and other emergency and defense personnel have effective communications available to them to assist the public as needed.

The Homeland Security Policy Council is comprised of senior staff from each of the Commission's Bureaus and will be directed by Marsha MacBride, the Commission's Chief of Staff.

- **CAPITALISM IN ACTiON! At least one envelope maker is looking into developing a microbe-proof mailing envelope** -- one made with chemically-treated anti-bacterial paper that could detect and kill anthrax spores. Mail-Well of Englewood, Colo., already has a new envelope design with an extra small window along the bottom edge. The theory is that any suspicious powder in the envelope would settle along the bottom which the mail handler could see without opening the envelope.

- **Another company (St. James Paper in Great Falls, Va) has patented "Safetylopes"** which have tiny holes along every edge to drain out any contaminant making them useless to mail germ-infested powder.

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of December 2001:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
Ø (*)	ABØSW	KIØRZ	(***)	KCØLUC
1 (*)	AA1ZB	KE1LZ	(***)	KB1HNL
2 (*)	AB2RE	KG2RN	(***)	KC2ISU
3 (*)	AA3XZ	KF3EC	(***)	KB3HHT
4 (*)	AG4MO	KV4GD	(***)	KG4QHP
5 (*)	AD5GP	KM5XL	(***)	KD5QMD
6 (*)	AE6AL	KR6EU	(***)	KG6IYB
7 (*)	AC7PT	KK7XA	(***)	KD7PBI
8 (*)	AB8LR	KI8KC	(***)	KC8SPG
9 (*)	AB9DN	KG9RA	(***)	KC9AQI
N. Mariana	NHØZ	AHØBB	KHØNO	WHØABP
Guam	(**)	AH2DO	KH2VO	WH2AOC
Hawaii	(**)	AH6RC	KH7ZZ	WH6DGR
Am.Samoa	AH8W	AH8AI	KH8DP	WH8ABF
Alaska	(**)	AL7RR	KL1FJ	WL7CVL
Virgin Isl.	(**)	KP2CS	NP2LU	WP2AIN
Puerto Rico	WP3T	KP3BL	WP3NV	WP4NOW

* = All 1-by-2 and 2-by-1 call signs have all been assigned. AA-AK-by-2 now being assigned.

** = All 2-by-1 call signs have been assigned.

***= Group "C" (N-by-3) call signs have all been allocated in all districts. (K-by-3 and W-by-3 are not assigned under the sequential call sign system. Available only to the Vanity Call Sign system.)

Note: The following prefix numerals are now allocated to Puerto Rico (KP, NP, WP3 or 4), Hawaii (AH, KH, NH, WH6 or 7) and Alaska (AL, KL, NL WL1-Ø)

[Source: FCC Amateur Service Database, Washington, DC]

- **You will shortly be hearing British Amateur stations on all HF bands (except 10 meters) using a new "M3" prefix.** These will be the new UK "Foundation" class licensees. Originally they were to have been issued a "M2" prefix but this was found to be unavailable. The "Foundation" license is issued to two types of radioamateurs. Those who have held a Class B (no code VHF/UHF) license for more than 12 months and beginners. The Class B amateurs must pass a so-called "Morse Assessment" - which is merely recognizing code characters using a "crib" sheet. Beginners must also pass a multiple choice examination at the end of a short training course. A novel feature is that British "Foundation Class" licensees may request their own call sign -- such as M3ABC. They list 3 choices, the first available is assigned by the Great Britain's Radiocommunications Agency.

RFID TAGS: CONNECTING PEOPLE AND OBJECTS

High-tech tags could mean the days of bar codes may be numbered. President Bush signed the Aviation Security bill into law on November 19th making airport security a direct federal responsibility. Included is the requirement that new security technologies be introduced to protect passengers.

These include "biometrics" to pre-screen passengers and airport personnel. Biometrics is the precision measuring and analyzing of human body characteristics ...such as fingerprints, eye retinas and irises, voice patterns, facial patterns, and hand measurements.

Also included was new baggage identification technology to accurately match passengers with bags for the duration of travel. *Radio Frequency IDentification* (RFID) technology will enable a bag and passenger to be matched while aboard a plane, ensuring that no checked baggage is placed on a plane unless the passenger who checks the baggage is aboard the aircraft.

The tiny RFID tag is attached to luggage and its information read from a distance by a radio scanner installed over the baggage system conveyer. The scanner can change or add to the information on the chip – a big improvement over bar codes.

The tags will be printed at the airline ticket or baggage counter just like today's bar-coded luggage tags. By matching signals from RFID tags on luggage with ticketing information, an airline will always know if a passenger and his or her bag are on the same flight. If a bag is on a flight, but the passenger is not, a handheld RFID reader can quickly locate the bag on a plane or baggage cart.

What is RFID technology ...and how does it work?

RFID technology has been around since the late 1940s when the U.S. military developed it for tracking equipment. RFID systems use radio transmissions to send energy to a passive or active transponder (an RFID tag) which in turn emits a unique identification code back to a data collection reader (or Interrogator.) The reader is linked to an information management system such as a PC. RFID typically operates at 125 kHz, 13.56 MHz and 900 MHz. It is more than just an ID code, it can be used as a data carrier, with information being written to and updated on the tag on the fly.

RFID systems effectively utilize two separate antennas - one on the RFID (transponder) tag, and one on the reader - to transfer the stored information by radio back to the data management system. Passive RFID tags are powered solely by the RF energy emitted from the reader.

RFID technology was perfected by Motorola which found a way to print a microscopic antenna on a tiny silicon chip about the size of a grain of sand. The chip can hold about 110 characters worth of programmable information – enough for passenger identification and destination.

A recent example of RFID is the "Speedpass" device used by people to fill car gas tanks without using their credit card at Mobil gas stations. The pass can be either a (passive) transponder attached to your key ring or a battery-powered (active) transponder attached to your car. Both emit an RF signal to a reader in the pump. The "Speedpass" contains a code that identifies your gasoline account. The pump is then activated and automatically charges your gas purchase to your credit card account.

Another example are toll-way pass systems which wave you on through toll collection booths. A battery operated (active) transponder emits an RF signal directly from your vehicle as you approach the toll-way gate.

Theme parks are also thinking of using RFID. Kids could carry tickets coded to match their parents' tickets. If a child were to leave the park without a parent, alarms would go off. Rides and attractions would even be able to address customers by name. RFID loaded "debit bracelets" could automatically charge admission prices.

As a technology, RFID tagging is still in its infancy with as yet untapped potential. The first step is to tag reusable containers. If the cost of RFID tags gets really inexpensive, then single-items like grocery and department store products could be labeled with "printed" chips.

When that happens, you won't even have to take the products out of the grocery cart to have them charged to your credit card ...just quickly wheel them past a checkout point. And returning products would be a "snap" since the tags could be rewritten with your purchase information. Products could be monitored from creation to delivery and, in the process, solve such issues as theft, counterfeiting and warranty claims.

An article in the November 15th issue of *EE Times* says "The use of UHF will represent a dramatic departure from the RFID status quo. Up to now, the vast majority of such systems have employed data transmissions across lower frequencies...."

"The major drawback is that most low-frequency systems needed proximities of no more than one to two feet between data readers and smart labels in order for information to be transmitted successfully."

UHF technology, on the other hand, allows greater broadcasting range and speedier performance. UHF data-reading devices can gather information off products as far away as 15 feet, and monitor as many as 40 packages per second.

"The industry's newfound interest in UHF stems from the emergence of silicon transceiver chips capable of operating in the 300-MHz to 1-GHz UHF spectrum," *EE Times* said. European companies want to use a frequency at 868 MHz for RFID to prevent interference to GSM cell phones, while North America prefers 915 MHz. UHF frequencies are totally unavailable for use within Japan.

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CUTTING EDGE TECHNOLOGY

The U.S. Global Positioning System to have competition. The *New York Times* (Nov. 26) carried an interesting story about how Europe is building their own satellite network to compete with GPS.

Europeans use the Global Positioning System which is run by the U.S. Department of Defense, but cannot accept reliance on a military system which has the possibility of being cut off. Their satellite network, called Galileo, will free other nations from reliance on the American GPS system. It will cost around $3.16 billion to build and is scheduled to be in operation by 2008.

China hopes to build an independent satellite navigation system within the next ten years. Russia is also in the process of reviving its Global Navigation Satellite System, a military-operated system known as Glonass.

EMERGING COMMUNICATIONS

Interesting quote from *"Futurist"* magazine: "The advent of linked automated translation systems means future students will no longer need to learn other languages, governments will no longer need to put pressure on minority groups to give up their native language, and human translators could eventually lose their jobs. Automated translation systems could enable most of the world's people to communicate directly with one another – each speaking and hearing in his or her own language – by about 2020."

Between 420 and 460 million cellular telephone handsets will be sold worldwide next year. Nokia, Motorola and researchers, IDC and The Yankee Group all predicted sales within that range, about a 10 percent increase. The growth will be fueled by new services, such as reading e-mails on cell phones.

COMPUTERS & SOFTWARE

The "Badtrans" e-mail worm has replaced "Sircam" in the number of current virus infections. The real name of the Internet worm is W32/-Badtrans@MM, "B" variant. It clobbered hundreds of thousands of PCs over the Thanksgiving weekend.

Badtrans is spread through Microsoft's Outlook e-mail program. Users should not open any e-mail that has an attachment in which the second extension is .pif or .scr. Any email that has such an attachment should be deleted. It arrives in the recipient's in-box with a "Re:" subject line that appears to be a response to an e-mail actually sent by the user.

Badtrans does not appear to delete data or cause any other damage. It is more annoying than destructive, automatically sending itself to unanswered e-mails and installing a keystroke logger on the infected machine.

The logger records everything someone types (including passwords and credit card information) and then forwards the information to various virus writer's e-mail addresses. These browser-based (mostly Yahoo and Excite) addresses have now been shut down. BadTrans is easily fixed using most vendors' anti-virus software.

A "vulnerability" (a Microsoft word for a programming error) in Internet Explorer 5.01 and 5.5 allows the worm to automatically execute upon arrival – no clicking necessary. Just reading or previewing the e-mail executes the worm. Microsoft has issued a patch for these two browsers, but most users have not downloaded and installed it. The new Internet Explorer 6.0 plugs this loophole.

The U.S. Postal Service currently controls 30% of the money-order market in the U.S., the same money transfer mechanism that was used by some of the Sept. 11th terrorists. The USPS has quietly put a new system in place to track suspicious money flow.

Web-based software analyzes money order purchase patterns that may indicate money-laundering activity or the funneling of money to terrorists. The system then tracks those orders through the banking system and can identify bank accounts through which they have passed.

Officials from the Dept. of Justice and the Dept. of the Treasury have also expressed interest in using the USPS money tracking system.

Classroom on the Web! Printed and bound textbooks could disappear as more interactive course work goes online. Publisher McGraw-Hill has recently launched a network of interactive electronic textbooks for grammar school kids..

The classroom net allows students to receive and send in their homework assignments and even take tests online. A digital teacher console keeps track of remote students and their progress. And parents are kept aware of student advancement through daily updates.

Teachers, students and parents can take a tour of the **McGraw-Hill Learning Network** at: <http://www.mhln.com>. Samples of the electronic textbooks are also online. It is really a neat system!

And while you are about it, check out college level training at: **McGraw-Hill Higher Education**: <www.mhhe.com>.

Future kids will spend more time mining information online than their teachers. Teachers may need to learn a new role: orchestrators of learning.

Microsoft has announced a new long term initiative called the eHome Division. Their mission is to develop entertainment and communications software and services for home users.

The unit is aimed at households with broadband Internet connections and home networks which will be greatly expanding in coming years.

The new Windows XP operating system already offers the basic eHome tools – a video instant messaging service and digital music management software.

Yahoo also is expanding similar services and has unveiled the ability to add video messages to its free e-mail.

Microsoft's Xbox videogame console was launched at midnight November 15th and much to the surprise of early buyers, at one store the salesman was Microsoft CEO, Bill Gates. He was on hand at New York's Times Square to distribute autographed copies to the first buyers; some hard core gamers had waited most of the day to get one.

The 300,000 Xboxes shipped nationwide for launch sold out the first day at $299.00 each. Microsoft now plans to ship 100,000 units a week through the end of the year.

Microsoft wants to be in videogaming because it is a huge $20 billion market and the sales of PCs is slowing. Even if the product sells well, Microsoft will lose $1 billion during the first three years before breaking even.

Long- term success for Microsoft will depend on having breakthrough titles – games that appeal to the average entertainment consumer – that are only available on the Xbox. A $50 Microsoft produced game yields $40 in profit.

Like other console makers, Microsoft is subsidizing the cost of the hardware in hopes of recovering its investment through sales of game software. It costs more than $400 to make the ($299) Xbox.

Sony is going into the Web credit card business in Japan. The "Elio" card contains a computer chip which is read by a "reader" attached to a computer. The card only works for purchases on Web sites that are "Elio" members. If it catches on, it will be expanded overseas.

INTERNET & WORLD WIDE WEB

It looks like the end of Prodigy Internet Service as we know it. Southwestern Bell Communications (SBC) has paid $465 million to purchase all shares of Prodigy that it did not already own.

On November 14th, SBC announced that it would be changing Prodigy's name to "SBC Yahoo" and they have entered into a marketing alliance with Yahoo to provide high speed (DSL) service in the 13 states serviced by SBC. SBC Yahoo is scheduled to launch in mid-2002.

Prodigy has already redesigned its portal and the Prodigy name will disappear by the end of 2002 when all dial-up customers will be switched over to the SBC Yahoo portal. SBC is the nation's largest DSL provider with 1.2 million customers.

According to Nielsen/NetRatings, the number of Web users rose 15 percent from 100.3 million surfers in October 2000 to more than 115.2 million in October 2001. More than 103.7 million people are surfing from home.

Another research firm, Jupiter Media Metrix had slightly different figures. They said the number of Web users reached 102.1 million, versus 80.7 million users in October 2000. The two firms use different methods of gathering data.

The three top Internet websites are AOL Time Warner with 80.6 million different visitors, Yahoo with 71.1 million, and MSN (Microsoft Network) with 66.9 million.

Nielsen/NetRatings says this year's online holiday shopping is 14% stronger than last year. Online retailer Amazon.com reported big sales gains. Sales were up 60% at "Yahoo! Shopping" the day after Thanksgiving.

A report by eMarketer expects a record quarter for online consumer spending in the fourth quarter of 2001. eMarketer said more than 14 million additional shoppers are online than in 2000. In its "U.S. Holiday Shopping Report", eMarketer forecasts online consumer spending to reach $10.7 billion in the fourth quarter of 2001, a 20.2% increase over last year.

The report also predicts that 58.7 million U.S. residents will buy online in the fourth quarter of 2001, spending an average of $182.25. Online retail sales is projected to reach more than $74 billion in 2002.

A J.D. Powers & Assoc. report says two-thirds of all new car buyers go to the Web to research information before they visit dealer showrooms. And most buyers prefer independent rather than manufacturer's Web sites. The study showed that Kelley Blue Book <www.kbb.com> was the most visited automotive site and <www.Edmunds.com> was the most useful. The study is based on responses from more than 26,400 consumers who purchased new 2001 and 2002 model year vehicles.

Check out what will be the largest and glitziest event Web site in sports history. The 2002 Winter Olympics site just went "live" at <www.olympics.com> (the official site) and <www.nbcolympics.com>. Both sites are the work of Microsoft and MSNBC, the official online content providers.

The site will feature exclusive live results during the February 8-24, 2002 Winter Games in Salt Lake City. Slide shows of events and athletes will be a focus of the site's coverage. The site also has a schedule of events and detailed explanations of all the included sports.

We have reported on <www.nakednews.com> before, a Web site that uses models wearing nothing but smiles to report on the day's news, sports and weather. Now they have competition from Australia. <www.MarketwrapUnwrapped.com> features women covering the day's stock market activity. Like Naked News, the announcers begin their reports clothed, and remove clothing as they go through their report.

WASHINGTON WHISPERS

Looking for FCC related information? As of Nov. 27th it will be easier to find! The FCC has added a commercial-style search tool to its website. The new FCC search engine searches throughout the FCC's web site, collecting information from web pages and many types of documents including Word, WordPerfect, Acrobat, Excel, and ASCII Text. The new FCC search engine also searches the *Electronic Document Management System* (EDOCS).

The new search engine cannot collect information from other FCC databases and electronic filing systems, such as the *Electronic Comment Filing System* (ECFS)

. You can access the new search tool at: <www.fcc.gov/searchtools.html>. It is also available with enhanced features at <http://search.fcc.gov>. To initiate a search, just insert relevant words or phrases into the textbox and click "go."

In 1998, the U.S. Congress adopted legislation that banned taxes on goods purchased online for three years. The moratorium expired on Oct. 21st.

By a voice vote on Nov. 15th, the Senate renewed the Internet tax ban for another two years. The House of Representatives approved an identical bill in October.

Although President Bush would have preferred a longer (five year) tax relief period, he said he would sign the bill.

"The administration believes that government should be promoting Internet usage and availability, not discouraging it with access taxes and discriminatory taxes," the White House said in a supporting statement.

The new Internet tax ban expires on Nov. 1, 2003. One study suggests states will lose $13.3 billion annually in uncollected sales taxes on Web commerce.

A 1992 Supreme Court decision prohibits states from collecting taxes on transactions unless the retailer has a physical presence in the state.

Libraries, private entities and the federal government now censoring information that used to be widely available. Since Sept. 11th, the federal government is posting less information that might be used against the United States to the Internet. National security, rather than the public's "right-to-know" is now the major consideration.

Atty. Gen. John Ashcroft said that, while "a well-informed citizenry" is essential to government accountability, national security should be a priority.

According to a feature story in the Nov. 18th *Los Angeles Times*,

- At least 15 federal agencies have yanked potentially sensitive information off the Internet, or removed Web sites altogether, for fear that terrorists could exploit the government data. The excised

material ranges from information on chemical reactors and risk-management programs to airport data and mapping of oil pipelines.

- Several states have followed the federal government's lead. California, for example, has removed information on dams and aqueducts, state officials said.
- Members of the public who want to use reading rooms at federal agencies such as the Internal Revenue Service must now make an appointment and be escorted by an employee to ensure that information is not misused.
- The Government Printing Office has begun ordering about 1,300 libraries nationwide that serve as federal depositories to destroy government records that federal agencies say could be too sensitive for public consumption.
- Federal agencies are imposing a stricter standard in reviewing hundreds of thousands of *Freedom of Information Act* requests from the public each year; officials no longer have to show that disclosure would cause "substantial harm" before rejecting a request. Watchdog groups say they have already started to see rejections of requests that likely would have been granted before.
- At the request of the U.S. Geological Survey, the Government Printing Office has ordered libraries to destroy a water resources guide.
- Non-government entities such as the *Federation of American Scientists* have begun curtailing information. They recently pulled 200 pages from its Web site with information on nuclear storage facilities and other government sites.

The FBI has developed remotely-installed key-logging software that, when placed on a suspects computer, can save all keystrokes. The electronic surveillance program (code named: *"Magic Lantern")* acts without the person's knowledge. It allows the FBI to intercept – and forward back – all keystrokes sent from a PC. *Magic Lantern* can be installed via e-mail over the Internet.

Its primary use is to capture PGP encryption keys that criminals may use to conceal data about illegal activities. PGP *(Pretty Good Privacy)* is a popular, publicly-available encryption program.

Magic Lantern was developed at the FBI's *Electronic Tools Laboratory*, the same outfit that built the bureau's "Carnivore" Internet surveillance technology. It is part of a much broader FBI surveillance project being developed under the code name: "Cyber Knight."

The 342-page anti-terrorist *USA Patriot Act of 2001* – signed into law on October 26th – makes it easier for the bureau to deploy the software. Agents can now install it simply by obtaining an order from a U.S. or state attorney general – without going through a court.

Manipulating the ionosphere. The Alaska-based HAARP – the *High-Frequency Active Auroral Research Project* – reportedly uses super- secret technology to find underground complexes. The Gakona, Alaska site uses the world's most powerful multi-megawatt radio transmitter and seventy-two 180-foot high "crossed dipole" antennas to create an artificial ionosphere from which ELF and VLF (30 Hz to 30 kHz) signals are penetrated deeply into the Earth. By measuring the return signal, the military can create "images" of underground facilities, including tunnels and caves. It is rumored that HAARP is being used to hunt for bin Laden's caves.

The American Civil Liberties Union is opposing the use of face recognition schemes at airports. They say that there is no photographic database of suspects or terrorists. Furthermore, studies by the U.S. government including the *Department of Defense* suggest that these systems "...would miss a high proportion of suspects included in the photo database, and flag huge numbers of innocent people...." ACLU says that "Several government agencies have abandoned facial-recognition systems after finding they did not work as advertised, including the *Immigration and Naturalization Service.*"

Still, Logan Airport in Boston (used by the Sept. 11th terrorists) is installing the system to improve security.

AMATEUR RADIO NEWS

The Foundation for Amateur Radio has announced its scholarship program for the academic year 2002-2003. The foundation funds or administers sixty-two different scholarships which are open to Radio Amateurs planning to pursue a full-time course of studies beyond high school and who have been accepted at an accredited university, college or technical school.

The awards range in value from $500 to $2,500 each ...with preference given in some cases to residents of certain geographic areas.

Additional information and an application form is available from: FAR Scholarships, P.O. Box 831, Riverdale, MD 20738.

Klaus D. Kramer, KA5NUP (General Class, Oklahoma City, OK) has been socked with a $9,500 fine by the FCC for what amounts to unlicensed and over-power operation in the CB band. The investigation was triggered by a January 20, 2001 complaint that a CB operator in Oklahoma City was operating with excessive power under the handle of "Bamm Bamm."

In February 2001, FCC agents from the Dallas, Texas field office traced CB Channel 19 signals coming from Kramer's residence. Other signals were traced to a multiple story building and to Mike's Cycle Shop, a business owned by Kramer. He admitted making the transmissions.

On site inspection revealed that he was using uncertified RF power amplifiers. Furthermore, the record shows that he had similar violations in March 1998 and October 1999. On each occasion, Kramer surrendered the transmitting equipment. The FCC said they were not persuaded that the amount is "excessive and unfair" and ordered him to pay the full amount $9,500 by December 13, 2001.

John E. Palmer, K4JP (Extra Class, Venice, FL) has been advised by the FCC that his alleged uncoordinated repeater (operating on 147.76 MHz from Holston Mountain, Tennessee) is causing interference to a coordinated repeater (N4RAG in Summers County, WV) operating on the same frequency. Unless Palmer can provide evidence of coordination, he has "...primary responsibility to resolve the interference."

The also FCC wants to know if he has received complaints regarding the K4JP repeater operation and what he has done to resolve them. Also being questioned is how he maintains control of the repeater when he resides in Florida. He is to respond within 20 days.

John A. Parker, Jr., AG4AZ (Brevard, NC) was also advised that his uncoordinated NY4X repeater on 147.03 MHz. was causing interference to KU4OL, a coordinated repeater. He, too, is being asked to respond to similar questions concerning the coordination status of his repeater its operating details.

Michael W. Richards, KI3S (Extra Class - Norfolk, VA) is to respond to numerous complaints that he has "interfered with and disrupted communications on 14.336 MHz." This occurred during November and is apparently in re-

taliation because he objects to the manner in which certain communications are carried out on the frequency. He was directed to forward any complaints he might have received to the FCC. "Retaliatory interference is prohibited by the Amateur Radio Service rules," FCC said.

Stephen S. Reichlyn, AA4V (Extra Class – Isle of Palms, SC) is being investigated for the alleged operation of AA4V/KP2 by "a former licensee in the U.S. Virgin Islands during a contest." Reichlyn allegedly rented the location and station equipment from this former licensee whom he allowed "to transmit messages from your station when you were off the premises or asleep during the time AA4V/KP2 was participating in the contest."

The FCC wants to know the full details concerning the operation of AA4V/KP2 during the *CQ Worldwide SSB Contest* between October 26-28, 2001 including the location of the AA4V/KP2 transmitters, identity of all operators and copies of the station logs.

Danny R. Fuller, KF6YYN, Max E. Sudds, WA6QAG, Robert E. Carvel, KE6RPI, Angus Winke, KC6OKA (all of Los Angeles, CA), Joanne G. Scott, KF76WZM (Pico Rivera, CA) and **Michael S. Marin, KF6FSD (Long Beach, CA)** have been notified that the *Two-meter Area Spectrum Management Assn.*, (TASMA) has granted the repeater frequency coordination of 145.46/144.86 MHz to the *Inland Empire ARC* station W6EIR.

The FCC says it has information that interference to the W6EIR repeater has been occurring from their stations operating on the same frequency using various callsigns. The FCC warned them that continued interference to W6EIR by their stations could result in a fine of up to $7,500. The matter has been forwarded to the Los Angeles FCC Field Office for appropriate enforcement action. "This is the last written notification you will receive before enforcement action is initiated," FCC said.

Jack Gerristen, KG6ORI (Bell, CA) qualified for a Technician class license which was issued on Nov. 8, 2001. The FCC has, however, set the license aside (canceled it) when it was learned that Gerristen has a long history of malicious interference to Southern California GMRS, law enforcement, Amateur Radio, TV remote links, and other public service frequencies. Gerritsen was arrested more than a year ago after the California Highway Patrol enlisted the FCC's help to track down obscene transmissions made on police frequencies.

Noli P. Patricio, KK6HX (Corona, CA) has been warned that his Advanced Class Amateur Radio license expired on March 13, 2000, yet a repeater operating under his call sign on the 448.94/443.94 MHz frequency pair continues to be on the air. Transmitting without a license subjects him to a fine or imprisonment as well as seizure of his radio transmitting equipment. He is to contact the FCC at once.

The FCC's Enforcement Bureau has been asked to resolve a dispute involving the "Country Cousins Net" (3.970 MHz), the Alabama Traffic Net (3.965 MHz), the Alabama Skywarn Net (also 3.965 MHz) and an Informal Group operating on adjacent frequencies, apparently 3.9675 or 3.968 MHz.) All parties operate within 5 kHz of each other.

The FCC directed their lengthy warning letter to **Jeremy Jackson,. K4JSJ (Birmingham, AL), Henry E. Willmon, WA4GQS (Mount Olive, AL), Salvatore Viglione, W4SAL (Inverness, FL)** and **William H. Cleveland, KR4TZ (Mobile, AL)** ...assumed to be members of the informal group.

"The Nets allege that the Informal Group operates unreasonably close to the Net's frequencies and causes interference. They further allege that when informed of the interference, the Informal Group increases power, antagonizes the Nets and sometimes moves even closer to the Nets' operations.

"The Nets allege that the Informal Group deliberately starts communications shortly before the generally known times that the Nets begin, and does so deliberately in order to disrupt the Nets' operations.

"The Nets allege that the Informal Group has sometimes used obscenity, profanity and other verbal abuse in response to Nets' courteous request that they change frequency or cease operation while the Net is in operation."

The Nets say they are long time users of the frequencies, some as long as 40 years. The Informal Group says that the Nets consider the frequencies "their frequency" regardless of existing communications and monopolize the frequencies for long periods of time.

The FCC warned all parties to the dispute that if any licensee engages in deliberate interference or retaliatory interference, or otherwise commits violations, they will be subject to a fine of up to $7,500. The FCC said it would "continue to review the situation, but declines to take enforcement action at this time."

"Any party committing rule violations does so at the peril of their license," FCC said. "We cannot, however, mandate courtesy, good and fair operating practices or even common sense.

"Nets are not specifically regulated under Commission rules and have no greater rights to any frequency than any other licensee, regardless of the number of members or how long they have been using any given frequency. Nets may wish to consider whether they are making the best use of Amateur frequencies at a given time, and whether it is good Amateur practice to take up congested spectrum discussing [net] business matters," FCC said. "However, we do not regulate content of communications, and these are not enforcement issues.

"The informal group needs to consider whether it is good Amateur practice to deliberately start communications on a frequency widely known to be used by a long established net or a net that sometimes handles emergency communications."

The FCC said any complaints about net operation should be taken up with the Wireless Telecommunications Bureau.

Eugene B. Reeves, K4VD (Extra Class – Jonesboro, GA) is being asked to respond within 20 days to a complaint that he used "obscene or indecent words or language" during transmissions he aired October 25, 2001 on 3.895 MHz.

Kathryn K. Tucker, AA6TK (Extra Class – La Mirada, CA) as trustee of the W6NUT repeater was advised on September 12, 2001, that their authority to operate W6NUT under automatic control was terminated. The W6NUT repeater may continue to transmit using only local or remote control, but the repeater must be made incapable of re-transmitting messages when there is no control operator at the control point insuring the immediate proper operation of the repeater.

Tucker said she was unable to provide a transcript of the repeater operations over a 14 days period as requested because it could possibly reach "over 12,000 pages at a cost of $60,000."

The FCC said it did not ask for a word-for-word transcript, but rather a summary covering points mentioned above and gave Tucker additional time to provide the information.

FIELD REPAIR OF COMMERCIAL HAM RADIO EQUIPMENT

Nicholas E. Leggett, N3NL of Reston, Virginia filed a six-page *Petition for Rulemaking* with the FCC on November 21st. He requests that all commercially-built Amateur Radio equipment be required by the FCC to be readily "field-repairable" in some manner. Leggett says he is "...an amateur extra class radio operator, independent inventor, and a certified electronics technician."

He contends that "...the engineering designs of current commercially-manufactured Amateur Radio equipment are having negative impacts on the goals and capabilities of the Amateur Radio Service."

The basis and purpose of the Amateur Service is "...being negatively impacted by the engineering design of commercially-built Amateur Radio equipment," Leggett adds

Inadequate Design for Field Repair

Most commercially-built Amateur Radio systems are difficult to repair in the field and are designed without consideration to the possible necessity of field repair, Leggett says. "The components are very densely packaged in a structural design that is optimized for machine assembly," making it "...extremely difficult to access, diagnose, and replace components in the field."

Leggett believes "Field repair is important because it enhances emergency communications preparedness and the growth of technical knowledge..."

"...modern commercially-built amateur radio systems resist efforts at field repair and so they inhibit [the] ability to provide continuous emergency communications. ...The importance of continuously reliable emergency communication has been increased by the new responsibility of homeland defense."

Technical Self-Training

"In the past, many amateur radio operators learned radio technology by repairing and modifying their own radio transmitters and receivers. The fairly open point-to-point wired radio circuits of the time were quite user-friendly to this do-it-yourself technical training."

Today's commercial Amateur Radio equipment is a "...very densely packaged system that is resistant to servicing or modification by the Amateur operator", Leggett argues, "...pushing the Amateur Radio Service away from being a technical service towards becoming more of a consumer radio service."

Innovation and Invention

"Over the years, Amateur Radio operators have been a major source of innovations and inventions [which is] inhibited by the current situation where the commercially-built Amateur Radio equipment is largely off-limits for the experimenter. Amateurs experience radio technology at a distance by book and classroom learning to qualify for their licenses. However, the hands-on experience of Amateur Radio is reduced. Hands-on experience is essential for inventive activity and for in-depth learning of technology." Hands-on experience provides the inventor with:

- Knowledge of real-world problems
- Feedback of what solutions are practical
- Stimulation from combining technologies
- Reduction of hands-on opportunities results in a reduction of the innovative and inventive aspects of Amateur Radio.

Recommended Actions by the Commission

Leggett wants the FCC to issue regulations to mandate such equipment design features as:

- Field-replaceable modules or circuit boards
- Required minimum spacing of components on circuit boards for access and replacement
- Test points and test jacks for measuring voltages, currents, and wave forms
- Light-emitting diode displays of bus signals on digital systems
- Chassis with access doors and removable shielding sections for radio frequency probing and field repair without removal of all the enclosures
- Removable integrated circuits mounted in sockets
- Availability of spare application-specific integrated circuits and other special components used in the Amateur Radio equipment
- Availability of service manuals and fully detailed schematic diagrams of commercially available Amateur Radio equipment (including specification of the normal voltages, currents, and waveforms at the equipment test points)

Leggett says these design enhancements cannot be left to the commercial Amateur Radio market place which is motivated by economics and will not make them.

Amateur Radio Receivers

Leggett said in is petition that his proposed regulations should not include stand-alone Amateur Radio receivers "...because it is difficult to differentiate an amateur radio receiver from a short wave receiver intended for the general public. An Amateur Radio transmitter or transceiver is easy to identify for the purposes of regulation."

Recommended First Action

The petitioner wants the FCC to issue a *Notice of Proposed Rule Making* (NPRM) or a *Notice of Inquiry* (NOI) requesting input on the subject of field repair of Amateur Radio equipment. Responses from the Amateur Radio community and commercial equipment manufacturers can then be requested.

WORLD RADIO CONFERENCE 2003 UPDATE

The FCC's Informal Working Group 6 (IWG-6) is considering Amateur Service issues in preparation for the upcoming World Radio Conference to be held June 9 to July 4, 2003 in Venezuela. On Oct. 25, 2001, the FCC updated their "Preliminary Views." on the various issues.

Agenda items that impact the Amateur Service are:

1.7: to consider issues concerning the amateur and amateur-satellite services:

1.7.1: possible revision of Article S25;

1.7.2: review of the provisions of Article S19 concerning the formation of call signs in the amateur services in order to provide flexibility for administrations;

1.7.3: review of the terms and definitions of Article S1 to the extent required as a consequence of changes made in Article S25.

Article S25 of the international Radio Regulations contains the fundamental guidelines that administrations must follow when authorizing their Amateur and Amateur-Satellite services. While most radioamateurs seem to be primarily interested in the Morse code proficiency requirement, there are many other important issues.

These include the definition of the Amateur and Amateur-Satellite Service, the requirement that administrations verify needed technical and operating qualifications, the content of amateur communications, third party traffic, station identification, transmitter power levels, flexible "special event" station call signs, the so-called "banned countries list", recognition of amateur licenses issued by other countries and the need to protect amateur spectrum against commercial use. The IARU also seeks a new provision urging that amateur stations prepare for and meet communication needs in the event of a natural disaster.

The FCC has not developed any "preliminary views" on these issues yet.

Agenda Item No. 1.23: to consider realignment of the allocations to the amateur, amateur-satellite and broadcasting services around 7 MHz on a worldwide basis.

Although they have multiple allocations, HF broadcasters are looking for more spectrum between 4 and 10 MHz. The Amateur Service only has one HF allocation at 7 MHz between 4 and 10 MHz. The 40 meter band is especially a problem since 7.000 to 7.300 MHz is currently allocated in our hemisphere to the Amateur Service with the 7.100 to 7.300 MHz segment allocated to HF broadcasting in the rest of the world.

Originally 7.000 to 7.300 MHz was allocated worldwide to the Amateur Service. In 1947, however, the Amateur Service in ITU Regions 2 and 3 (the "rest of the world") was squeezed down to 7.000 to 7.100 MHz.

The IARU wants the 300 kHz width returned to a worldwide allocation. The question is where to put it so that short-wave broadcasters and radio amateurs do not interfere with one another.

The United States has adopted a "Preliminary View" supporting a return to the previous allocation of 300 kHz around 7 MHz worldwide "...to eliminate the Regional differences between the allocations to the broadcasting service and the amateur services.." The IARU said it would accept an allocation of 6.900 to 7.200 MHz or 7.000 to 7.300 MHz. Some broadcasters, on the other hand, would like amateurs worldwide at 6.800-7.100 MHz so they would not have to move from 7100-7300.

The 40-meter dilemma is well spelled out in an IARU write-up online at: <www.iaru.org/7-MHz-Spectrum.pdf>.

Agenda Item No. 1.36: to examine the adequacy of the frequency allocations for HF broadcasting from about 4 MHz to 10 MHz, taking into account the seasonal planning procedures adopted by WRC-97.

The United States "Preliminary View" is that it "recognizes that there is a concern among HF broadcasters that they are prevented from providing a good quality service under many propagation conditions because there is an undersupply of spectrum for the broadcasting service in the bands below 10 MHz. Thus, the United States agrees with the need for a thorough study of the consequences of the current situation, augmented with projections of future use of HF bands for broadcasting."

Agenda Item No. 1.38: to consider provision of up to 6 MHz of frequency spectrum to the Earth exploration-satellite service (active) in the frequency band 420-470 MHz.

A similar agenda item was debated at WRC-97 resulting in a decision not to adopt proposed allocations for the Earth exploration-satellite service (EESS) in the 420-470 MHz band. These satellite-based radars gather the characteristics of Earth by penetrating land, sea and ice.

Amateurs are concerned with the possibility of harmful interference to amateur operations in the 430-440 MHz portion of the band. There are currently 16 amateur satellites in orbit that use frequencies within the band 435-438 MHz for both up and down links internationally. Proponents are particularly interested in the 432-438 MHz band.

The band 420-450 MHz is also allocated to the radiolocation service (Government radar) on a primary basis and is used for early missile surveillance and warning, detection of low-observable targets, and the tracking of objects in Earth orbit.

The U.S. opposes this allocation unless it can be shown that EESS sensors would not (a) cause harmful interference to radiolocation systems in the 420-450 MHz band and (b) would not cause harmful interference to amateur systems and stations in the 420-450 MHz band.